

We Study any Metal Surface
with Electronic
SEM Technique

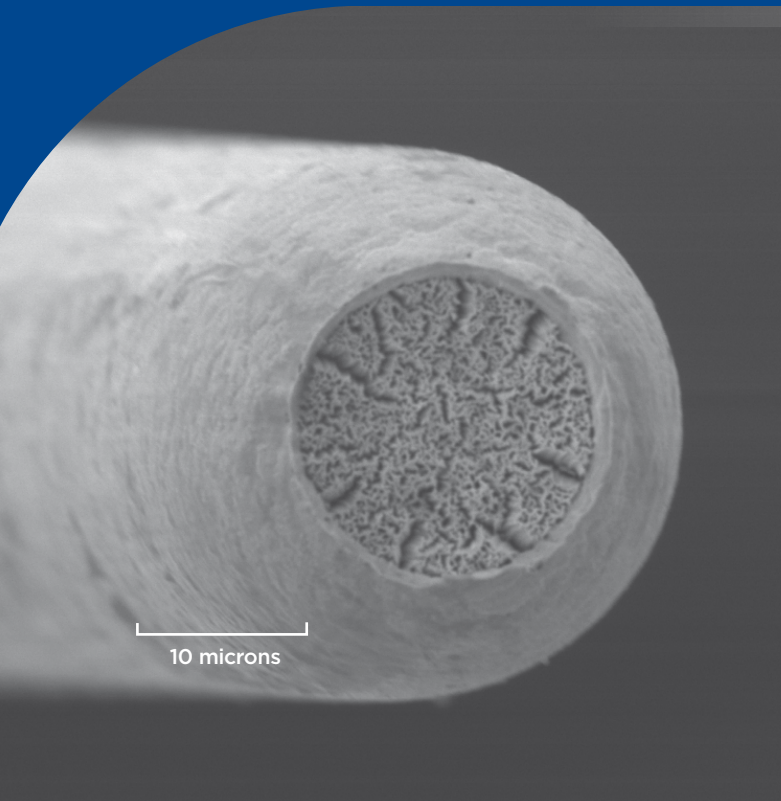
LUMA TECHNOLOGY

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Certified in accordance to ISO 9001:2008 and 14001:2004

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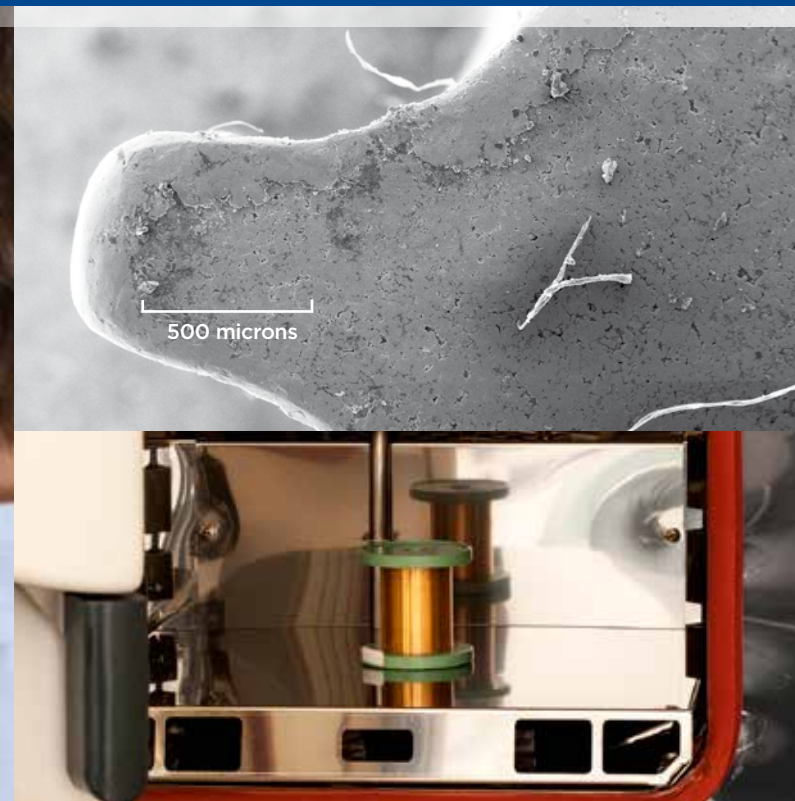
More than 80 years of experience



▲ Material analysis of fine gold plated wire with SEM technique.



▲ Material analysis with SEM technique.



▲ Special oven for material fast ageing.



▼ Laboratory environments for testing and evaluation.

Solving Corrosion & Failure Analysis Problems

Luma Technology is a full service facility using the latest techniques and equipment, to provide microscopic and analytic study of any metal surface.

We specialize in corrosion and failure analysis using state of the art SEM, AAS and EDS techniques and equipment, to solve corrosion and product failure problems.

Our Quality Services:

Topography

Surface irregularities, Surface roughness, Surface appearance.

Chemistry

Composition of corrosion residuals, Alloy composition, Identification.

Defects

Cracks, Pores in coating, Coating defects, Dirt, Bad adhesion of coating. These matters can also be studied by using cross section.

Corrosion

Type of corrosion, Corrosion products, Level of corrosion.

Cleanliness

Surface cleanliness can semi-quantitatively be studied by using backscattered electron mode, for example after the degreasing and pickling processes.



Material Analysis Capabilities

At Luma Metall we have a well equipped laboratory for testing and development. In our laboratory we carry out various wet chemistry, physical and thermal reports as well as corrosion testing.

The instruments, equipments and various laboratory set-ups available at Luma Metall include:

- (Flame) Atomic Absorption Spectroscopy (AAS)
- Scanning electron microscopy (SEM) and energy dispersive spectroscopy (EDS)
- Grinding and polishing equipment
- Climatic Test cabinet
- Tensile test machine
- Laser equipment for ovality measurements
- Light optical microscope (LOM)

Example of Case Studies

Defect analysis

SEM corrosion failure analysis

Evaluation and explanation of the mechanism behind failure.

In the service includes:

- Macroscopic inspections and photos
- Light Optical Microscopic inspections and photos
- Cross section analysis of the sample mould in epoxy
- SEM analysis
- Chemical analysis by EDS
- Documentation and reporting

Preventive analysis

Corrosion resistance analysis

Evaluation and estimation of the corrosion resistance, of for example coatings. Detection of porosity and defects.

In the service includes:

- Climatic chamber exposure
- Light Optical Microscopic inspections and photos
- Cross section analysis of the sample mould in epoxy
- SEM analysis
- Chemical analysis by EDS
- Unique methods, for example porosity measurements
- Documentation and reporting